AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently Amended)   A network routing apparatus ~~according to Claim 1,~~ for determining a routing address of a packet in a network on the basis of header information of said packet and routing said packet to said routing address, comprising:

a plurality of packet forwarding units for performing a process of forwarding input packets;

a packet distribution unit for distributing input packets supplied from an interface of a router into said packet forwarding units in order or into empty ones of said packet forwarding units which do not now perform processing; and

a packet rearrangement unit for performing rearrangement of packets in inputting order of the packets which are subjected to said packet forwarding process by said packet forwarding units;

wherein said packet distributing unit determines one of said packet forwarding units for distributing a packet on the basis of a header condition of said packet so that a series of packets to be forwarded from a packet sender address to a

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forwarding address are not arranged in reversed order even in a case where said packets are not rearranged by said packet rearrangement unit.

3-7.   (Canceled)

8.   (Currently amended)   A network routing apparatus ~~according to Claim 6,~~ for determining a routing address of a packet in a network on the basis of header information of said packet and routing said packet to said routing address, comprising:

a plurality of packet forwarding units for performing a process of forwarding input packets;

each of said packet forwarding units including:

a packet header operating mechanism for extracting a header of a packet and rewriting said header;

a plurality of packet retrieving units for performing packet header retrieval while said packet header extracted by said packet header operating mechanism is used as a key;

a retrieval packet distribution mechanism for distributing packet headers to said plurality of packet retrieving units; and

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a retrieval packet rearrangement unit for rearranging packet header retrieval results supplied from said plurality of packet retrieving units;

wherein said retrieval packet distribution mechanism determines a packet retrieving unit used for distribution of packets on the basis of header conditions of said packets so that the order of said packets is not reversed among a series of packets to be forwarded from a packet sender address to a forwarding address even when said packets are not rearranged by said retrieval packet rearrangement unit.

9.   (Currently amended) A network routing apparatus according to Claim 6, for determining a routing address of a packet in a network on the basis of header information of said packet and routing said packet to said routing address, comprising:

a plurality of packet forwarding units for performing a process of forwarding input packets;

each of said packet forwarding units including:

a packet header operating mechanism for extracting a header of a packet and rewriting said header;

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a plurality of packet retrieving units for performing

packet header retrieval while said packet header extracted by

said packet header operating mechanism is used as a key;

a retrieval packet distribution mechanism for

distributing packet headers to said plurality of packet

retrieving units; and

a retrieval packet rearrangement unit for rearranging

packet header retrieval results supplied from said plurality

of packet retrieving units;

wherein[[:]] said packet headers are numbered in sequence

by said retrieval packet distribution unit when said packet

headers are distributed to said packet retrieving units by

said retrieval packet distribution unit;

said packet retrieving units retain said packet headers

with said packet header sequence numbers while said packet

retrieving units perform said packet header retrieving

process; and

said retrieval packet rearrangement unit rearranges

retrieval results in the order of said packet header sequence

numbers.

10-11.   (Canceled)

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12.   (Currently amended)   A network routing apparatus ~~according to Claim 6,~~ for determining a routing address of a packet in a network on the basis of header information of said packet and routing said packet to said routing address, comprising:

a plurality of packet forwarding units for performing a process of forwarding input packets;

each of said packet forwarding units including:

a packet header operating mechanism for extracting a header of a packet and rewriting said header;

a plurality of packet retrieving units for performing packet header retrieval while said packet header extracted by said packet header operating mechanism is used as a key;

a retrieval packet distribution mechanism for distributing packet headers to said plurality of packet retrieving units; and

a retrieval packet rearrangement unit for rearranging packet header retrieval results supplied from said plurality of packet retrieving units;

wherein[[:]] said packet retrieving units classify packets on the basis of header conditions of said packets and

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outputting numbers specifying results of the classification as retrieval results;

said retrieval packet rearrangement unit measures packet transfer rates in accordance with said numbers specifying said classification results of said packets received from said packet retrieving units; and

when a quantity of input packets exceeds a predetermined value, a process of aborting packets, a process of aborting packets easily at the time of traffic congestion or a process of suppressing an output rate of the packets to prevent the output rate of the packets from exceeding a predetermined value is executed in accordance with results of said measurement.